

BLC VIII COURSE REDESIGN: CHANGING THE WAY WE GET OUR MAJORS STARTED

NAME Jean Schmidt INSTITUTION U. of Pittsburgh

TOTAL UNDERGRADUATE ENROLLMENT AT YOUR INSTITUTION 30k

1. Which of the following applies to your department?

☒ Two-semester intro course (annual enrollment: 2k)

☐ Three-semester intro course

☐ We don't have a standard intro series for our majors

2. Which of the following applies to you or your department?

☐ A. I/We are interested in course redesign

☐ B. I/We recently redesigned our course

☒ C. I/We are in the process of course redesign

If you selected A, describe your current course.

If you selected B, complete the following statements:

We went from

Now our course

If you selected C, complete the following statement:

The best feature of our new course is lab is separate from lecture

3. List (*the?*) three important things students should be able to do once they have completed their introductory courses in a biology major.

feel excited
have an increased sense of real science
design an experiment

Please include additional comments on the back of this sheet.

① Time: ^{TA} amt. of time / lab time
need for feedback

if doing inquiry
- students need time to think
pre-lab work

② Resources: ~~Resistance~~ ^{have} codebook resources; want inquiry

is a sol'n
(come into lab ready to go)

③ Resistance: faculty resistance

BLC VIII COURSE REDESIGN: CHANGING THE WAY WE GET OUR MAJORS STARTED

NAME Jim Colbert

INSTITUTION Iowa State

TOTAL UNDERGRADUATE ENROLLMENT AT YOUR INSTITUTION 29,000

1. Which of the following applies to your department?

☒ Two-semester intro course (annual enrollment: 2,500)

☐ Three-semester intro course

☐ We don't have a standard intro series for our majors

2. Which of the following applies to you or your department?

☐ A. I/We are interested in course redesign

☐ B. I/We recently redesigned our course

☒ C. I/We are in the process of course redesign

If you selected A, describe your current course.

If you selected B, complete the following statements:

We went from

Now our course

If you selected C, complete the following statement:

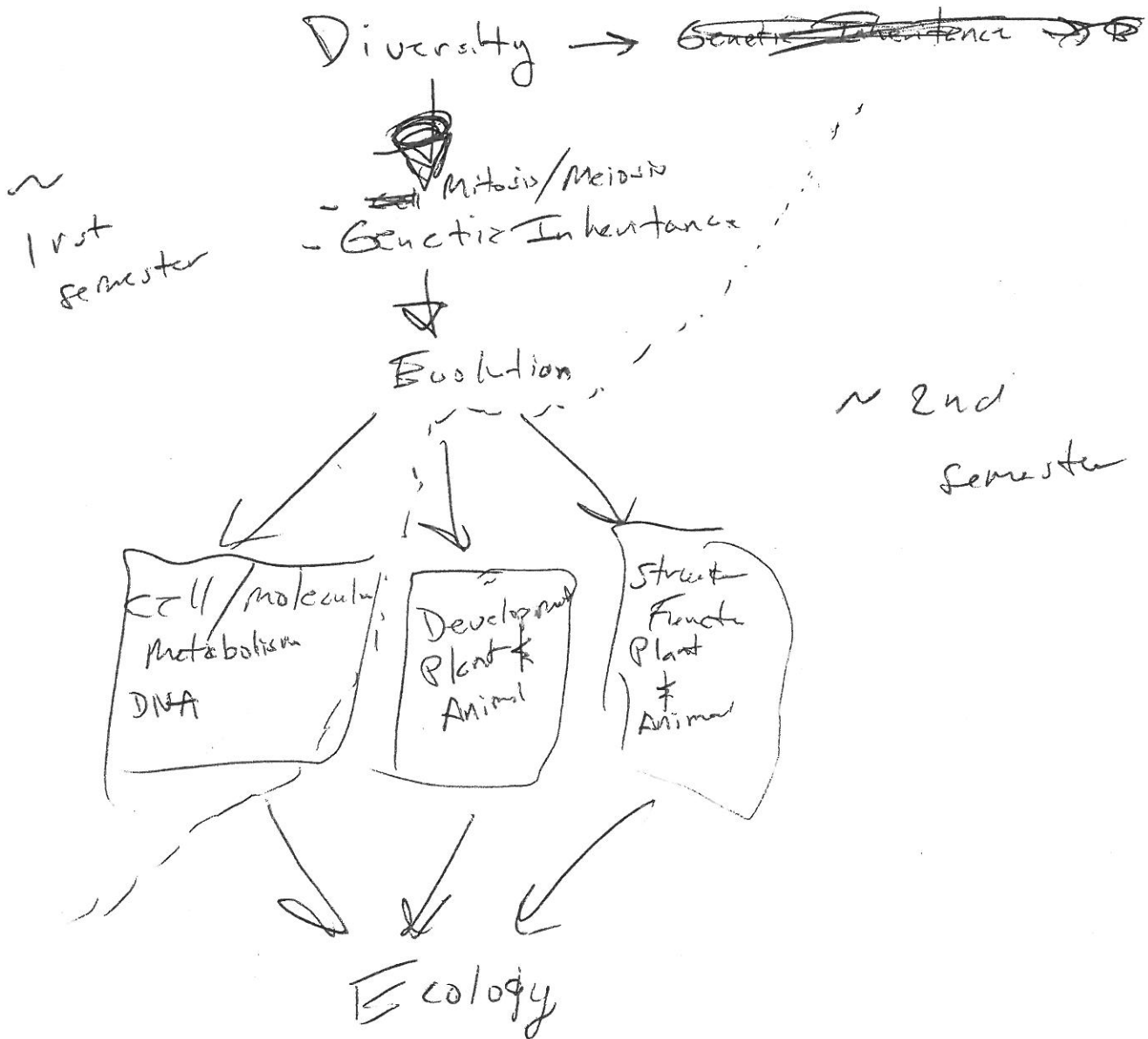
The best feature of our new course is explicit emphasis
on the Nature of Science

3. List (the?) three important things students should be able to do once they have completed their introductory courses in a biology major.

Understand that evolution is the explanation for biodiversity
Understand the structure & function of cells & organisms
Understand interactions within & among species & the environment

Please include additional comments on the back of this sheet.

- TA time / Lab Time
- culture change
- Lab return



BLC VIII COURSE REDESIGN: CHANGING THE WAY WE GET OUR MAJORS STARTED

NAME Nancy Pelaez INSTITUTION Purdue

TOTAL UNDERGRADUATE ENROLLMENT AT YOUR INSTITUTION 30,000

1. Which of the following applies to your department?

☒ Two-semester intro course (annual enrollment: 325)

☐ Three-semester intro course

☐ We don't have a standard intro series for our majors

2. Which of the following applies to you or your department?

☐ A. I/We are interested in course redesign

☐ B. I/We recently redesigned our course

☒ C. ~~I~~ We are in the process of course redesign

If you selected A, describe your current course.

If you selected B, complete the following statements:

We went from

Now our course

If you selected C, complete the following statement:

The best feature of our new course is extensive writing about experimental reasoning in primary literature

3. List (the?) three important things students should be able to do once they have completed their introductory courses in a biology major.

① Help students know what they do or do not know and what to do to figure things out on their own.

② Help students understand they can reason using scientific principles at the atomic/molecular level to explain how things work at the organism/ecosystem level.

Please include additional comments on the back of this sheet.

↓ a focus on things in the textbook that are now better understood

Help students appreciate the unity and diversity of life and that biological evolution is useful for hypothesizing and testing predictions that can be empirically tested to advance knowledge in useful ways.

BLC VIII COURSE REDESIGN: CHANGING THE WAY WE GET OUR MAJORS STARTED

NAME Michael Pini

INSTITUTION Texas Tech Univ.

TOTAL UNDERGRADUATE ENROLLMENT AT YOUR INSTITUTION 28,000, or so

1. Which of the following applies to your department?

☒ Two-semester intro course (annual enrollment: 1200)

☐ Three-semester intro course

☐ We don't have a standard intro series for our majors

2. Which of the following applies to you or your department?

☐ A. I/We are interested in course redesign

☐ B. I/We recently redesigned our course

☒ C. I/We are in the process of course redesign

If you selected A, describe your current course.

If you selected B, complete the following statements:

We went from

Now our course

If you selected C, complete the following statement:

The best feature of our new course is

Formative assessment in class w/ clickers

3. List (the?) three important things students should be able to do once they have completed their introductory courses in a biology major.

Solve novel problems by applying principles of biology
Succeed in upper-level biology courses
think critically about the concepts of biology

Please include additional comments on the back of this sheet.

BLC VIII COURSE REDESIGN: CHANGING THE WAY WE GET OUR MAJORS STARTED

NAME Deb Roess

INSTITUTION Colorado State Univ

TOTAL UNDERGRADUATE ENROLLMENT AT YOUR INSTITUTION ~ 23,000

1. Which of the following applies to your department?

☐ Two-semester intro course (annual enrollment: _____)

☐ Three-semester intro course

☒ We don't have a standard intro series for our majors

{ Course is a "LIFE" sequence used by a number of majors.

2. Which of the following applies to you or your department?

☐ A. I/We are interested in course redesign

☐ B. I/We recently redesigned our course

☒ C. I/We are in the process of course redesign

- Some majors require 2 semesters
- other majors requires 1 semester (cell biol. intro)

If you selected A, describe your current course.

If you selected B, complete the following statements:

We went from

Now our course

Each instructor in 1st / 2nd Semester is responsible for his/her course design, content, etc.

If you selected C, complete the following statement:

- iclickers/discussion
- extensive use of Mastering
- Group Exams (study groups)

The best feature of our new course is

3. List (the?) three important things students should be able to do once they have completed their introductory courses in a biology major.

develop study skills that can be generalized to any body of information

have fundamental understanding of biological concepts that can be used as a foundation in subsequent classes

The only thing we've agreed on is the text & a split between 1st & 2nd Semester (Ch. 24 in Campbell)

Please include additional comments on the back of this sheet.

BLC VIII COURSE REDESIGN: CHANGING THE WAY WE GET OUR MAJORS STARTED

NAME JEAN HEITZ

INSTITUTION UNIVERSITY OF WISCONSIN-MADISON

TOTAL UNDERGRADUATE ENROLLMENT AT YOUR INSTITUTION 30,000

1. Which of the following applies to your department?

☒ Two-semester intro course (annual enrollment: _____)

☐ Three-semester intro course

☒ We don't have a standard intro series for our majors

more than the above ✓ as options

2. Which of the following applies to you or your department?

☐ A. I/We are interested in course redesign

☐ B. I/We recently redesigned our course

☒ C. I/We are in the process of course redesign

If you selected A, describe your current course.

If you selected B, complete the following statements:

We went from

Now our course

If you selected C, complete the following statement:

The best feature of our new course is

*true team teaching
& integration among faculty with focus on integration
of concepts across all of bio.*

3. List (the?) three important things students should be able to do once they have completed their introductory courses in a biology major.

*Understand how to & be able to effectively solve novel problems
Integrate understanding across concepts to develop a strong lasting
Work effectively & communicate effectively in groups. understanding*

Please include additional comments on the back of this sheet.

*Ideal
course
examples
to be used*

Obstacles to ideal
soln's to obst's

Obstacles

sm gyps outside of cl
& jobs

Solns

facil's for gyps
meet on line

lcr for study gyps

BLC VIII COURSE REDESIGN: CHANGING THE WAY WE GET OUR MAJORS STARTED

NAME Craig T. Jordan

INSTITUTION University of Texas @ San Antonio

TOTAL UNDERGRADUATE ENROLLMENT AT YOUR INSTITUTION 27K

1. Which of the following applies to your department?

☒ Two-semester intro course (annual enrollment: 1200)

☐ Three-semester intro course

☐ We don't have a standard intro series for our majors

2. Which of the following applies to you or your department?

☒ A. I/We are interested in course redesign

☐ B. I/We recently redesigned our course

☒ C. I/We are in the process of course redesign

If you selected A, describe your current course.

If you selected B, complete the following statements:

We went from traditional lecture

Now our course group collaboration

problem solving

If you selected C, complete the following statement: integrating across chapter topics

The best feature of our new course is

3. List (the?) three important things students should be able to do once they have completed their introductory courses in a biology major.

- Put factual information into broader perspective
- Retain the information and be able to use it in subsequent courses
- Have a broader perspective of what might be interesting to pursue in biology as well as opportunities available to them
- "Soft Skills" and preparation to reassess reasonable goals

Please include additional comments on the back of this sheet.

Obstacles
Faculty buy-in

Solutions

Getting Dean's Chair on board to
FORCE Senior faculty to change
teaching methodology (or stop teaching the
course)

BLC VIII COURSE REDESIGN: CHANGING THE WAY WE GET OUR MAJORS STARTED

NAME MARIUS PFEIFFER **INSTITUTION** TARRANT COUNTY COLLEGE

TOTAL UNDERGRADUATE ENROLLMENT AT YOUR INSTITUTION ~ 40,000

1. Which of the following applies to your department?

☒ Two-semester intro course (annual enrollment: 800)

☐ Three-semester intro course

☐ We don't have a standard intro series for our majors

2. Which of the following applies to you or your department?

☒ A. I/We are interested in course redesign

☐ B. I/We recently redesigned our course

☒ C. I/We are in the process of course redesign

If you selected A, describe your current course.

If you selected B, complete the following statements:

We went from

Now our course

If you selected C, complete the following statement:

The best feature of our new course is OBJECTIVE BASED LECTURE
TRANSITION TO INQUIRY LABS (30% THROUGH
PROCESS)

3. List (the?) three important things students should be able to do once they have completed their introductory courses in a biology major.

THINK IN AN ANALYTICAL MANNER (SCIENTIFIC
METHOD)
GET STUDENTS EXCITED ABOUT LEARNING SCIENCE
SHOW STUDENTS HOW TO THINK ACROSS CONCEPTS

Please include additional comments on the back of this sheet.

OBSTACLES:

COVERAGE VERSUS INSIGHTS

SOLUTIONS:

- DIVERSITY
- COLLS
- MODCULTS
- FORM + FUNCTION
- ECOLOGY, EVOLUTION

H.M.I. SUPPORTS CURRICULUM REVISION.

BLC VIII COURSE REDESIGN: CHANGING THE WAY WE GET OUR MAJORS STARTED

NAME Mary Pat Wenzel INSTITUTION Univ. Washington

TOTAL UNDERGRADUATE ENROLLMENT AT YOUR INSTITUTION 30,000

1. Which of the following applies to your department?

☒ 3 Quarter 1 Yr
Two-semester intro course (annual enrollment: 3,500)

☐ Three-semester intro course

☐ We don't have a standard intro series for our majors

2. Which of the following applies to you or your department?

☐ A. I/We are interested in course redesign

☐ B. I/We recently redesigned our course

☒ C. I/We are in the process of course redesign

If you selected A, describe your current course.

If you selected B, complete the following statements:

We went from

Now our course

If you selected C, complete the following statement:

The best feature of our new course is

3. List (the?) three important things students should be able to do once they have completed their introductory courses in a biology major.

- Logical Thinking = Support Claims with evidence
- Create sound logical arguments in Science
- Use the fundamental core concepts of Biology to explain Biological Function

Please include additional comments on the back of this sheet.

Obstacles

- Faculty buy-in

Solutions

HHMI grant for incentives

Ideal Course

- Students practicing thinking in Biology
- Concepts vs. Content = more process less Content

Diversity of life - Cells - Form + Function - Ecology + Evol.

BLC VIII COURSE REDESIGN: CHANGING THE WAY WE GET OUR MAJORS STARTED

NAME Michelle Withers

INSTITUTION West Virginia Univ.

TOTAL UNDERGRADUATE ENROLLMENT AT YOUR INSTITUTION ~25,000

1. Which of the following applies to your department?

☐ Two-semester intro course (annual enrollment: _____)

☐ Three-semester intro course

☐ We don't have a standard intro series for our majors

☒ other 4 semester Intro/Core

2. Which of the following applies to you or your department?

☐ A. I/We are interested in course redesign

☒ B. I/We recently redesigned our course - lab (completed but still improving)

☒ C. I/We are in the process of course redesign - lecture (some sections complete others in progress).

If you selected A, describe your current course.

If you selected B, complete the following statements:

We went from

Now our course

If you selected C, complete the following statement:

The best feature of our new course is Recipe labs are gone & have been replaced by guided & open inquiry for 2 semesters

3. List (the?) three important things students should be able to do once they have completed their introductory courses in a biology major.

State a testable, falsifiable hypothesis

Design a reasonable exp to address the hypothesis

Read 1^o lit and write scientific reports

Please include additional comments on the back of this sheet.

Ideal Intro Course

Obstacles

Solutions

BLC VIII COURSE REDESIGN: CHANGING THE WAY WE GET OUR MAJORS STARTED

NAME EMILY TAYLOR

INSTITUTION CAL POLY, SLO

TOTAL UNDERGRADUATE ENROLLMENT AT YOUR INSTITUTION 19,000

1. Which of the following applies to your department?

☐ Two-semester intro course (annual enrollment: _____)

☐ Three-semester intro course

☐ We don't have a standard intro series for our majors

☒ 4-quarter intro course (annually ~ 500)

2. Which of the following applies to you or your department?

☐ A. I/We are interested in course redesign

☒ B. I/We recently redesigned our course

☐ C. I/We are in the process of course redesign

If you selected A, describe your current course.

If you selected B, complete the following statements:

We went from plants in one quarter,
animals another, etc.

Now our course ① History + Diversity of Life ② Molecular/Cell Bio ③ Plant/Animal Form + Function
④ Ecology and Evolution

If you selected C, complete the following statement:

The best feature of our new course is

It builds logically on the tree of life.

3. List (the?) three important things students should be able to do once they have completed their introductory courses in a biology major.

Think critically about scientific problems.

Answer questions on major biological concepts

Read graphs

Please include additional comments on the back of this sheet.

BLC VIII COURSE REDESIGN: CHANGING THE WAY WE GET OUR MAJORS STARTED

NAME Greg Podgorst INSTITUTION Utah State University

TOTAL UNDERGRADUATE ENROLLMENT AT YOUR INSTITUTION 29,000

1. Which of the following applies to your department?

☒ Two-semester intro course (annual enrollment: 830)

☐ Three-semester intro course

☐ We don't have a standard intro series for our majors

2. Which of the following applies to you or your department?

☒ A. I/We are interested in course redesign

☒ B. I/We recently redesigned our course

☐ C. I/We are in the process of course redesign

If you selected A, describe your current course.

mostly traditional lecture but with clicker questions, including group clicker questions in class. Labs are

If you selected B, complete the following statements:

We went from

Now our course

If you selected C, complete the following statement:

The best feature of our new course is

3. List (the?) three important things students should be able to do once they have completed their introductory courses in a biology major.

content knowledge
problem solving
critical/nature of science

Please include additional comments on the back of this sheet.

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NAME John Merrill

INSTITUTION Mich St Univ

TOTAL UNDERGRADUATE ENROLLMENT AT YOUR INSTITUTION 42,000

1. Which of the following applies to your department?

- ☒ Two-semester intro course (annual enrollment: 3200) ^{course} enrollments
- ☐ Three-semester intro course
- ☐ We don't have a standard intro series for our majors

2. Which of the following applies to you or your department?

- ☒ A. I/We are interested in course redesign
- ☒ B. I/We recently redesigned our course
- ☐ C. I/We are in the process of course redesign

If you selected A, describe your current course.

Semi-active w/ extensive use of clickers + peer instruction

If you selected B, complete the following statements:

We went from

Switched order

Now our course

If you selected C, complete the following statement:

The best feature of our new course is

3. List (the?) three important things students should be able to do once they have completed their introductory courses in a biology major.

Describe bio. as evolution

Give examples of how cells define orgs

Structure/Function

Please include additional comments on the back of this sheet.

Obstacles

Solutions

BLC VIII COURSE REDESIGN: CHANGING THE WAY WE GET OUR MAJORS STARTED

NAME Jon Monroe

INSTITUTION James Madison Univ.

TOTAL UNDERGRADUATE ENROLLMENT AT YOUR INSTITUTION 18 K

1. Which of the following applies to your department?

☐ Two-semester intro course (annual enrollment: _____)

☐ Three-semester intro course

☒ We don't have a standard intro series for our majors 4 courses

2. Which of the following applies to you or your department?

☐ A. I/We are interested in course redesign

☒ B. I/We recently redesigned our course

☐ C. I/We are in the process of course redesign

If you selected A, describe your current course.

If you selected B, complete the following statements:

We went from Bot, Zoo, Cell, Genet., Ecol (3rd lab)

Now our course Organisms, Ecol/Evol, Cell/Mol, Genet./Dev.
all w/ investigative labs

If you selected C, complete the following statement:

The best feature of our new course is

3. List (the?) three important things students should be able to do once they have completed their introductory courses in a biology major.

Think like scientists

Understand the process of science

Be able to make connections across subdisciplines

Please include additional comments on the back of this sheet.

#3 There is no ideal Intro course -
what you want to do will work for
your students better than doing
what you think someone else
wants you to do.

Obstacles - getting everyone that cares on board

wait till key problem people die.

grass roots energy

BLC VIII COURSE REDESIGN: CHANGING THE WAY WE GET OUR MAJORS STARTED

NAME Tom Owens INSTITUTION Cornell

TOTAL UNDERGRADUATE ENROLLMENT AT YOUR INSTITUTION 20,000

1. Which of the following applies to your department?

☐ Two-semester intro course (annual enrollment: _____)

☐ Three-semester intro course

☒ We don't have a standard intro series for our majors

2. Which of the following applies to you or your department?

☐ A. I/We are interested in course redesign

☒ B. I/We recently redesigned our course

☐ C. I/We are in the process of course redesign

If you selected A, describe your current course.

If you selected B, complete the following statements:

We went from 2 semester standard intro bio →

Now our course 6 core courses (Physiology, Cell & Development, Evolution, Ecology, Biochemistry, Genetics)

If you selected C, complete the following statement:

The best feature of our new course is

3. List (the?) three important things students should be able to do once they have completed their introductory courses in a biology major.

think critically and use/apply biological information
carry forward a broad biological "perspective"
know how to learn/study effectively

Please include additional comments on the back of this sheet.

Obstacles: faculty and administrative reluctance
lack of knowledge about how to do this
our students are already well trained and
successful (grad school, med school acceptance)
why change anything?
lack of knowledge/interest in pedagogy

Solutions: keep trying
attend BLC regularly (good ideas, therapy)

BLC VIII COURSE REDESIGN: CHANGING THE WAY WE GET OUR MAJORS STARTED

NAME Mark Lyford

INSTITUTION University of Wyoming

TOTAL UNDERGRADUATE ENROLLMENT AT YOUR INSTITUTION 11,000

1. Which of the following applies to your department?

☐ Two-semester intro course (annual enrollment: _____)

☐ Three-semester intro course

☐ We don't have a standard intro series for our majors

☒ Variable depending on major; 1 "intro"; 3 - 2000 level, 4 - 3000 level

2. Which of the following applies to you or your department?

☐ A. I/We are interested in course redesign

☒ B. I/We recently redesigned our course

☒ C. I/We are in the process of course redesign

If you selected A, describe your current course.

If you selected B, complete the following statements:

We went from lots of info; little discussion across sections

Now our course "less is more"; discussions across sections about learning outcomes; common 3's on exams

If you selected C, complete the following statement:

The best feature of our new course is we are constantly challenging ourselves with how we teach & always modifying

3. List (the?) three important things students should be able to do once they have completed their introductory courses in a biology major.

Understand Science as process
Critical thinking
linking concepts across biology

Please include additional comments on the back of this sheet.

BLC VIII COURSE REDESIGN: CHANGING THE WAY WE GET OUR MAJORS STARTED

NAME MARVIN O'NEAL

INSTITUTION STONY BROOK

TOTAL UNDERGRADUATE ENROLLMENT AT YOUR INSTITUTION ~ 20 K

1. Which of the following applies to your department?

☒ Two-semester intro ^{LAB} course (annual enrollment: _____)

☒ Three-semester intro ^{LECTURE} course

☐ We don't have a standard intro series for our majors

2. Which of the following applies to you or your department?

☐ A. I/We are interested in course redesign

☒ B. I/We recently redesigned our course

☒ C. I/We are in the process of course redesign

If you selected A, describe your current course.

INTRO. TO BIO LABS → FROM HIGH SCHOOL TO DESIGNING YOUR OWN EXPERIMENT IN

If you selected B, complete the following statements:

2 SHORT SEMESTERS.

We went from COOKBOOK LABS FOCUSED ON CONTENT

Now our course GRADUAL CONTINUUM FROM COOKBOOK TO DESIGN FOCUSED ON SKILLS.

If you selected C, complete the following statement:

The best feature of our new course is PRODUCTS / 3D MODELS

3. List (the?) three important things students should be able to do once they have completed their introductory courses in a biology major.

- BASIC STATS IN BIO

- WRITE / CLEANLY ARTICULATE IDEAS

- ANALYZE DATA

Please include additional comments on the back of this sheet.

BLC VIII COURSE REDESIGN: CHANGING THE WAY WE GET OUR MAJORS STARTED

NAME RUSHOA RAMAKRISHNA INSTITUTION Chandler Gilbert Community College.
TOTAL UNDERGRADUATE ENROLLMENT AT YOUR INSTITUTION 14,000

1. Which of the following applies to your department?

- ☒ Two-semester intro course (annual enrollment: 800? _{appr.})
☐ Three-semester intro course
☐ We don't have a standard intro series for our majors

2. Which of the following applies to you or your department?

- ☐ A. I/We are interested in course redesign
☒ B. I/We recently redesigned our course
☒ C. I/We are in the process of course redesign

Always evolving!

If you selected A, describe your current course.

If you selected B, complete the following statements:

We went from *traditional* → *seamless lecture lab format*

Now our course *students are actively engaged in the learning process. Come up with learning objectives.*

If you selected C, complete the following statement:

The best feature of our new course is

used different modalities of teaching & learning in the classroom.

3. List (the?) three important things students should be able to do once they have completed their introductory courses in a biology major.

- ① *Should be able to think & solve problems using science process skills*
② *Understand the basics of cell & molecular biology*
③ *Learn to apply what they have learned & transfer the knowledge to subsequent courses.*

Please include additional comments on the back of this sheet.

Obstacle Fit everything into a semester
Solution
Think long term

BLC VIII COURSE REDESIGN: CHANGING THE WAY WE GET OUR MAJORS STARTED

NAME Randy Phillips

INSTITUTION UMass

TOTAL UNDERGRADUATE ENROLLMENT AT YOUR INSTITUTION 21,500

1. Which of the following applies to your department?

- ☒ Two-semester intro course (annual enrollment: 1350/semester)
- ☐ Three-semester intro course
- ☐ We don't have a standard intro series for our majors

2. Which of the following applies to you or your department?

- ☐ A. I/We are interested in course redesign
- ☒ B. I/We recently redesigned our course
- ☐ C. I/We are in the process of course redesign

If you selected A, describe your current course.

If you selected B, complete the following statements:

We went from STRAIGHT LECTURE

Now our course FULL REDESIGN A LA OWENS
12 YEARS AGO

If you selected C, complete the following statement:

The best feature of our new course is

EMPHASIS ON MODEL-BASED REASONING.

3. List (the?) three important things students should be able to do once they have completed their introductory courses in a biology major.

- PREDICT RESULTS OF CHANGES TO BIOLOGICAL PROCESSES
- INTERPRET DATA IN COMPARISON TO PREDICTIONS
- DESIGN EXPERIMENTS TO GENERATE DATA & TEST PREDICTIONS

Please include additional comments on the back of this sheet.

BLC VIII COURSE REDESIGN: CHANGING THE WAY WE GET OUR MAJORS STARTED

NAME Angie Hodgeson

INSTITUTION North Dakota State Univ.

TOTAL UNDERGRADUATE ENROLLMENT AT YOUR INSTITUTION _____

1. Which of the following applies to your department?

☒ Two-semester intro course (annual enrollment: 1700)

☐ Three-semester intro course

☐ We don't have a standard intro series for our majors

2. Which of the following applies to you or your department?

for lecture ☒ ~~A~~ A. I/We are interested in course redesign

for lab ☒ B. I/We recently redesigned our course

☐ C. I/We are in the process of course redesign

If you selected A, describe your current course. 2 Semester Course

Semester 1 - Biochemistry, Cell Biology, Genetics, microevolution

If you selected B, complete the following statements: Semester 2 - macroevolution

We went from

Now our course

Tree of Life (Diversity +
Adaptation), Ecology
Animal + Plant
physiology

If you selected C, complete the following statement:

The best feature of our new course is

3. List (the?) three important things students should be able to do once they have completed their introductory courses in a biology major.

- Increase biology literacy for functioning in the modern world
 - Have knowledge of the process of biology, so students can
 - think like a scientist
- use successful in advanced courses

Please include additional comments on the back of this sheet.

Obstacles

Culture change

TA time + TA availability

Getting agreement ~~to~~ ~~with~~ among faculty

Solution

Narrow focus of the lab

- teach process of science first + foremost

BLC VIII COURSE REDESIGN: CHANGING THE WAY WE GET OUR MAJORS STARTED

NAME Kim Quillin

INSTITUTION Salisbury University

TOTAL UNDERGRADUATE ENROLLMENT AT YOUR INSTITUTION 7500

1. Which of the following applies to your department?

☐ Two-semester intro course (annual enrollment: _____)

☐ Three-semester intro course

☐ We don't have a standard intro series for our majors

☒ One-semester intro course (annual: 400)

2. Which of the following applies to you or your department?

☐ A. I/We are interested in course redesign

☒ B. I/We recently redesigned our course

☐ C. I/We are in the process of course redesign

If you selected A, describe your current course.

If you selected B, complete the following statements:

We went from standard lecture/lab course

Now our course studio-style hybrid course 20 student/section
No lecture (combined lab/discussion 2hrs 2x week). Online modules
to be completed before class each week.

If you selected C, complete the following statement:

The best feature of our new course is

3. List (the?) three important things students should be able to do once they have completed their introductory courses in a biology major.

Exercise the process of science

Think at higher Blooms levels

Process skills such as graphing, other quant. skills, etc.
Have a conceptual framework in biology for future learning.

Please include additional comments on the back of this sheet.

Obstacles

- time-intensity of redesign
- faculty/cultural support

BLC VIII COURSE REDESIGN: CHANGING THE WAY WE GET OUR MAJORS STARTED

NAME Karen Gerhart INSTITUTION UC Davis

TOTAL UNDERGRADUATE ENROLLMENT AT YOUR INSTITUTION 30,000?

1. Which of the following applies to your department?

☐ Two-semester intro course (annual enrollment: _____)

☒ ^{quarter} Three-~~semester~~ intro course

☐ We don't have a standard intro series for our majors

2. Which of the following applies to you or your department?

☐ A. I/We are interested in course redesign

☒ B. I/We recently redesigned our course

☐ C. I/We are in the process of course redesign

If you selected A, describe your current course.

If you selected B, complete the following statements:

We went from cell / animal / plant

Each in isolation

Now our course common features & origins of life / Mechanisms of diversification /
Exploration of Existing Diversity
Better integration
more conceptual foci

If you selected C, complete the following statement:

The best feature of our new course is

3. List (the?) three important things students should be able to do once they have completed their introductory courses in a biology major.

Describe ^{or name} essential ingredients of all life

Explain why 1 of these is essential to origins & continuation of life

Explain why the cell is the smallest unit of life

Please include additional comments on the back of this sheet.

obstacles

Lack of faculty buy-in, resulting in diff ^{content} ~~cont~~
depending on faculty member teaching class

Emphasis on factsoids rather than larger concepts

Inconsistent / changing teaching staff

TA Training / understanding of course goals

Lack of Flexibility - book choice

Solutions

Much more support at level of department / college

Agreed upon learning goals & pedagogy (Ha!!)

BLC VIII COURSE REDESIGN: CHANGING THE WAY WE GET OUR MAJORS STARTED

NAME Rob Jackson

INSTITUTION Duke Univ.

TOTAL UNDERGRADUATE ENROLLMENT AT YOUR INSTITUTION ~ 6,000

1. Which of the following applies to your department?

☒ Two-semester intro course (annual enrollment: ~300)

☐ Three-semester intro course

☐ We don't have a standard intro series for our majors

2. Which of the following applies to you or your department?

☐ A. I/We are interested in course redesign

☒ B. I/We recently redesigned our course

☐ C. I/We are in the process of course redesign

If you selected A, describe your current course.

If you selected B, complete the following statements:

We went from a broad survey course

Now our course is more focused, covering ^{molecular} development in one semester + evolution/diversity in another.

If you selected C, complete the following statement:

The best feature of our new course is

3. List (the?) three important things students should be able to do once they have completed their introductory courses in a biology major.

Synthesize biological knowledge

Build a framework on which to hang more

Understand the process of science ^{detailed bio. knowledge}

Please include additional comments on the back of this sheet.

Obstacles - overcoming reluctance to change
by Faculty - don't want to alter
previous classes
students - rote memorization,

Solutions - providing resources for faculty
rewarding students for synthesis

BLC VIII COURSE REDESIGN: CHANGING THE WAY WE GET OUR MAJORS STARTED

NAME TINA HARTNEY

INSTITUTION CAL POLY, POMONA

TOTAL UNDERGRADUATE ENROLLMENT AT YOUR INSTITUTION 19,000

1. Which of the following applies to your department?

- ☒ ~~B- quarter 6 yrs.~~ ^{taken} 3 course series (over 3 quarters) = 1 yr.
☐ Two-semester intro course (annual enrollment: _____)
☐ Three-semester intro course
☐ We don't have a standard intro series for our majors

2. Which of the following applies to you or your department?

- ☐ A. I/We are interested in course redesign
☒ B. I/We recently redesigned our course *piloted 2004/05 - full scale implementation 2005/06*
☐ C. I/We are in the process of course redesign

If you selected A, describe your current course.

If you selected B, complete the following statements:

We went from *Taxon-based intro focus to theme based*
Now our course

If you selected C, complete the following statement:

The best feature of our new course is

3. List (the?) three important things students should be able to do once they have completed their introductory courses in a biology major.

I am happy to send you our list of these.

kbhartney@calpolyhona.edu

Please include additional comments on the back of this sheet.

BLC VIII COURSE REDESIGN: CHANGING THE WAY WE GET OUR MAJORS STARTED

NAME Marcia Shofner INSTITUTION Univ. Maryland

TOTAL UNDERGRADUATE ENROLLMENT AT YOUR INSTITUTION 25,000

1. Which of the following applies to your department?

☐ Two-semester intro course (annual enrollment: 1,300)

☒ Three-semester intro course

☐ We don't have a standard intro series for our majors

2. Which of the following applies to you or your department?

☐ A. ☒ We are interested in course redesign

☒ B. I/We recently redesigned our course 3 semesters for all majors

☐ C. I/We are in the process of course redesign

If you selected A, describe your current course.

If you selected B, complete the following statements:

We went from 2 semesters

Now our course 3 semesters

If you selected C, complete the following statement:

The best feature of our new course is integration of chem, physics + math

3. List (the?) three important things students should be able to do once they have completed their introductory courses in a biology major.

integrate material - think across disc. w/ diversity
understand science - "think like scientist"
learn how to - evolution -

Please include additional comments on the back of this sheet.

BLC VIII COURSE REDESIGN: CHANGING THE WAY WE GET OUR MAJORS STARTED

NAME Michael Burk

INSTITUTION Cal Poly, San Luis Obispo

TOTAL UNDERGRADUATE ENROLLMENT AT YOUR INSTITUTION ~18,000

1. Which of the following applies to your department?

☐ Two-semester intro course (annual enrollment: _____)

☐ Three-semester intro course

☐ We don't have a standard intro series for our majors

☒ 4 qtr intro series (~750 students)

2. Which of the following applies to you or your department?

☐ A. I/We are interested in course redesign

☒ B. I/We recently redesigned our course

☐ C. I/We are in the process of course redesign

If you selected A, describe your current course.

If you selected B, complete the following statements:

We went from 4 qtr system: ① cells/ecology: evo; ② plants; ③ animals;

Now our course ① diversity ② cells/molecules ③ farm-fxn (plants: microbiology)
④ ecology: evolution

If you selected C, complete the following statement:

The best feature of our new course is

not focused on taxonomy; focused on concepts

3. List (the?) three important things students should be able to do once they have completed their introductory courses in a biology major.

- Be able to interpret biological data
- Be able to connect chemistry to ecosystems
- Be able to identify their area of interest

Please include additional comments on the back of this sheet.

BLC VIII COURSE REDESIGN: CHANGING THE WAY WE GET OUR MAJORS STARTED

NAME Clarissa

INSTITUTION Evergreen State College

TOTAL UNDERGRADUATE ENROLLMENT AT YOUR INSTITUTION _____

1. Which of the following applies to your department?

____ Two-semester intro course (annual enrollment: _____)

____ Three-semester intro course

☒ We don't have a standard intro series for our majors

2. Which of the following applies to you or your department?

____ A. I/We are interested in course redesign

____ B. I/We recently redesigned our course

____ C. I/We are in the process of course redesign

We redesign our
courses every year
with new teaching
teams!

If you selected A, describe your current course.

Interdisciplinary introductory science w/

If you selected B, complete the following statements:

We went from

Now our course

biology, chemistry
and one other
STEM faculty
member.

If you selected C, complete the following statement:

The best feature of our new course is

3. List (the?) three important things students should be able to do once they have completed their introductory courses in a biology major.

- Design experiments in any content area
- Give a compelling 15 minute science presentation
- Self assess their own learning and adjust their study habits accordingly.

Please include additional comments on the back of this sheet.

BLC VIII COURSE REDESIGN: CHANGING THE WAY WE GET OUR MAJORS STARTED

NAME VINCENT CASSONE INSTITUTION U. Kentucky

TOTAL UNDERGRADUATE ENROLLMENT AT YOUR INSTITUTION 26000

1. Which of the following applies to your department?

- ☒ Two-semester intro course (annual enrollment: 800)
- ☐ Three-semester intro course
- ☐ We don't have a standard intro series for our majors

2. Which of the following applies to you or your department?

- ☒ A. I/We are interested in course redesign
- ☒ B. I/We recently redesigned our course
- ☒ C. I/We are in the process of course redesign

If you selected A, describe your current course.

we are reforming the entire curriculum

If you selected B, complete the following statements:

We went from traditional Campbell-based descriptive course with wet lab

Now our course changed order of semesters -

now start w/ biodiversity and evolution - end

If you selected C, complete the following statement:

The best feature of our new course is

increased upper division lab

3. List (the?) three important things students should be able to do once they have completed their introductory courses in a biology major.

Read scientific literature

write scientifically

access and analyze bibliographic and sequence databases

Biology
got rid of
wet lab
teach
computer
lab

Please include additional comments on the back of this sheet.

We have set up two cohorts of introductory biology students - half receive ~~traditional~~ course The other half receive new course - we will in the next three years assess progress through curriculum -

BLC VIII COURSE REDESIGN: CHANGING THE WAY WE GET OUR MAJORS STARTED

NAME _____ INSTITUTION _____

TOTAL UNDERGRADUATE ENROLLMENT AT YOUR INSTITUTION _____

1. Which of the following applies to your department?

____ Two-semester intro course (annual enrollment: _____)

____ Three-semester intro course

____ We don't have a standard intro series for our majors

2. Which of the following applies to you or your department?

____ A. I/We are interested in course redesign

____ B. I/We recently redesigned our course

____ C. I/We are in the process of course redesign

If you selected A, describe your current course.

If you selected B, complete the following statements:

We went from

Now our course

If you selected C, complete the following statement:

The best feature of our new course is

3. List (the?) three important things students should be able to do once they have completed their introductory courses in a biology major.

- evaluate evidence
- explain phylogenetic/tree thinking
- integrate concepts across levels of biol. hierarchy

Please include additional comments on the back of this sheet.

#4

- engaged students
- active learning
- well-integrated lab + course
- techn. tools

BLC VIII COURSE REDESIGN: CHANGING THE WAY WE GET OUR MAJORS STARTED

NAME Steve Christensen

INSTITUTION Brigham Young University - Idaho

TOTAL UNDERGRADUATE ENROLLMENT AT YOUR INSTITUTION _____

1. Which of the following applies to your department?

☒ Two-semester intro course (annual enrollment: 400)

☐ Three-semester intro course

☐ We don't have a standard intro series for our majors

2. Which of the following applies to you or your department?

☒ A. I/We are interested in course redesign

☒ B. I/We recently redesigned our course

☒ C. I/We are in the process of course redesign

yes it really is all three

If you selected A, describe your current course.

If you selected B, complete the following statements:

We went from *two very different courses*

Now our course *integrated integrating policies & formats into a single course over two semesters w/ learning objectives*

If you selected C, complete the following statement:

The best feature of our new course is *Study guides, recitation labs
Focused on Scientific literature & developing thinking skills*

3. List (the?) three important things students should be able to do once they have completed their introductory courses in a biology major.

Analyze, evaluate, think critically, support conclusions
Have a solid foundation of terms (concepts) and how to use them.
Articulate Biology

Please include additional comments on the back of this sheet.

BLC VIII COURSE REDESIGN: CHANGING THE WAY WE GET OUR MAJORS STARTED

NAME Jung Choi

INSTITUTION Georgia Tech

TOTAL UNDERGRADUATE ENROLLMENT AT YOUR INSTITUTION _____

1. Which of the following applies to your department?

☒ Two-semester intro course (annual enrollment: 1000)

☐ Three-semester intro course

☐ We don't have a standard intro series for our majors

2. Which of the following applies to you or your department?

☒ A. I/We are interested in course redesign

☒ B. I/We recently redesigned our course

☒ C. I/We are in the process of course redesign

If you selected A, describe your current course.

continually evolving

If you selected B, complete the following statements:

We went from..... all ppt lectures

Now our course.... has more active learning / discussion
✓ JITT, clickers,

If you selected C, complete the following statement:

The best feature of our new course is more interaction, student engagement

3. List (the?) three important things students should be able to do once they have completed their introductory courses in a biology major.

Describe how life evolves

Describe how life interacts / changes the physical

use
predict and genetic information

environment

Please include additional comments on the back of this sheet.

BLC VIII COURSE REDESIGN: CHANGING THE WAY WE GET OUR MAJORS STARTED

NAME Ruth Buskirk

INSTITUTION Univ Texas Austin

TOTAL UNDERGRADUATE ENROLLMENT AT YOUR INSTITUTION ~~38~~ 39,000

1. Which of the following applies to your department?

☒ Two-semester intro course (annual enrollment: 3200 ~~4000~~)

☐ Three-semester intro course

☐ We don't have a standard intro series for our majors

2. Which of the following applies to you or your department?

- ☒ A. I/We are interested in course redesign *formerly redesign of content areas*
- ☒ B. I/We recently redesigned our course
- ☒ C. I/We are in the process of course redesign *now beginning redesign with learning objectives*

If you selected A, describe your current course.

If you selected B, complete the following statements:

We went from

Now our course

If you selected C, complete the following statement:

The best feature of our new course is

3. List (the?) three important things students should be able to do once they have completed their introductory courses in a biology major.

- describe life processes (how things work)
- recognize big picture relationships
- tell how new ^{scientific} information is gathered and related

Please include additional comments on the back of this sheet.

Obstacle: 'too many topics' to
Solution. teach in two semester Course

consider curriculum-level
(long term) instead of
just ^{single} course goals

BLC VIII COURSE REDESIGN: CHANGING THE WAY WE GET OUR MAJORS STARTED

NAME Sukanya Subramanian INSTITUTION Collin College, TX

TOTAL UNDERGRADUATE ENROLLMENT AT YOUR INSTITUTION _____

1. Which of the following applies to your department?

☒ Two-semester intro course (annual enrollment: ≈ 1500)

☐ Three-semester intro course

☐ We don't have a standard intro series for our majors

2. Which of the following applies to you or your department?

☐ A. I/We are interested in course redesign

☐ B. I/We recently redesigned our course

☐ C. I/We are in the process of course redesign

If you selected A, describe your current course.

If you selected B, complete the following statements:

We went from

Now our course

If you selected C, complete the following statement:

The best feature of our new course is

3. List (the?) three important things students should be able to do once they have completed their introductory courses in a biology major.

Know & Understand the Fundamentals Concept and themes in Biology
Be Able to Analyse & Interpret Data
Make Connections with other Disciplines

Please include additional comments on the back of this sheet.